

Title (en)

Apparatus for the production of hydrogen-rich gas

Title (de)

Vorrichtung zur Herstellung eines wasserstoffreichen Gases

Title (fr)

Appareil pour la production d'un gaz riche en hydrogène

Publication

EP 1690826 A2 20060816 (EN)

Application

EP 06001972 A 20060131

Priority

- US 5225305 A 20050207
- US 12266205 A 20050505

Abstract (en)

A method and apparatus for the production of hydrogen-rich gas are provided. The method and apparatus prevent over-reduction of iron oxide-based shift catalyst (1) by introducing an oxidative stream (21) along with a carbon monoxide containing gaseous feed stream (11) from a catalytic steam reformer (81) to the catalyst bed region and thereby limits structural deterioration of the catalyst. Various sources may provide the oxidative stream including a shift catalyst bed region and a selective oxidation catalyst region.

IPC 8 full level

C01B 3/38 (2006.01); **C01B 3/48** (2006.01); **C01B 3/56** (2006.01); **C01B 3/58** (2006.01)

CPC (source: EP US)

C01B 3/38 (2013.01 - EP US); **C01B 3/48** (2013.01 - EP US); **C01B 3/56** (2013.01 - EP US); **C01B 3/583** (2013.01 - EP US); **C01B 2203/0233** (2013.01 - EP US); **C01B 2203/0283** (2013.01 - EP US); **C01B 2203/0288** (2013.01 - EP US); **C01B 2203/0294** (2013.01 - EP US); **C01B 2203/043** (2013.01 - EP US); **C01B 2203/044** (2013.01 - EP US); **C01B 2203/0465** (2013.01 - EP US); **C01B 2203/047** (2013.01 - EP US); **C01B 2203/0475** (2013.01 - EP US); **C01B 2203/048** (2013.01 - EP US); **C01B 2203/0495** (2013.01 - EP US); **C01B 2203/1047** (2013.01 - EP US); **C01B 2203/148** (2013.01 - EP US)

Cited by

EP2404869A1; CN102826508A; EP2801550A1; CN105189340A; RU2666897C2; US10173895B2; US10087074B2; US10549991B2; WO2012004032A1; WO2016135302A1; WO2011055132A1; WO2014180763A1; US8821833B2; US9365421B2; US9725385B2; US9950975B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1690826 A2 20060816; **EP 1690826 A3 20070829**; **EP 1690826 B1 20140813**; CA 2534706 A1 20060807; CA 2534706 C 20100629; ES 2496544 T3 20140919; US 2006188435 A1 20060824; US 7510696 B2 20090331

DOCDB simple family (application)

EP 06001972 A 20060131; CA 2534706 A 20060131; ES 06001972 T 20060131; US 12266205 A 20050505